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Intermountain Forest and Range Experiment Station
REED W. BAILEY, DIRECTOR

Ogden, Utah

May 1956

MOUNTAIN PINE BEETLE INFESTATION
IN GLACIER NATIONAL PARK

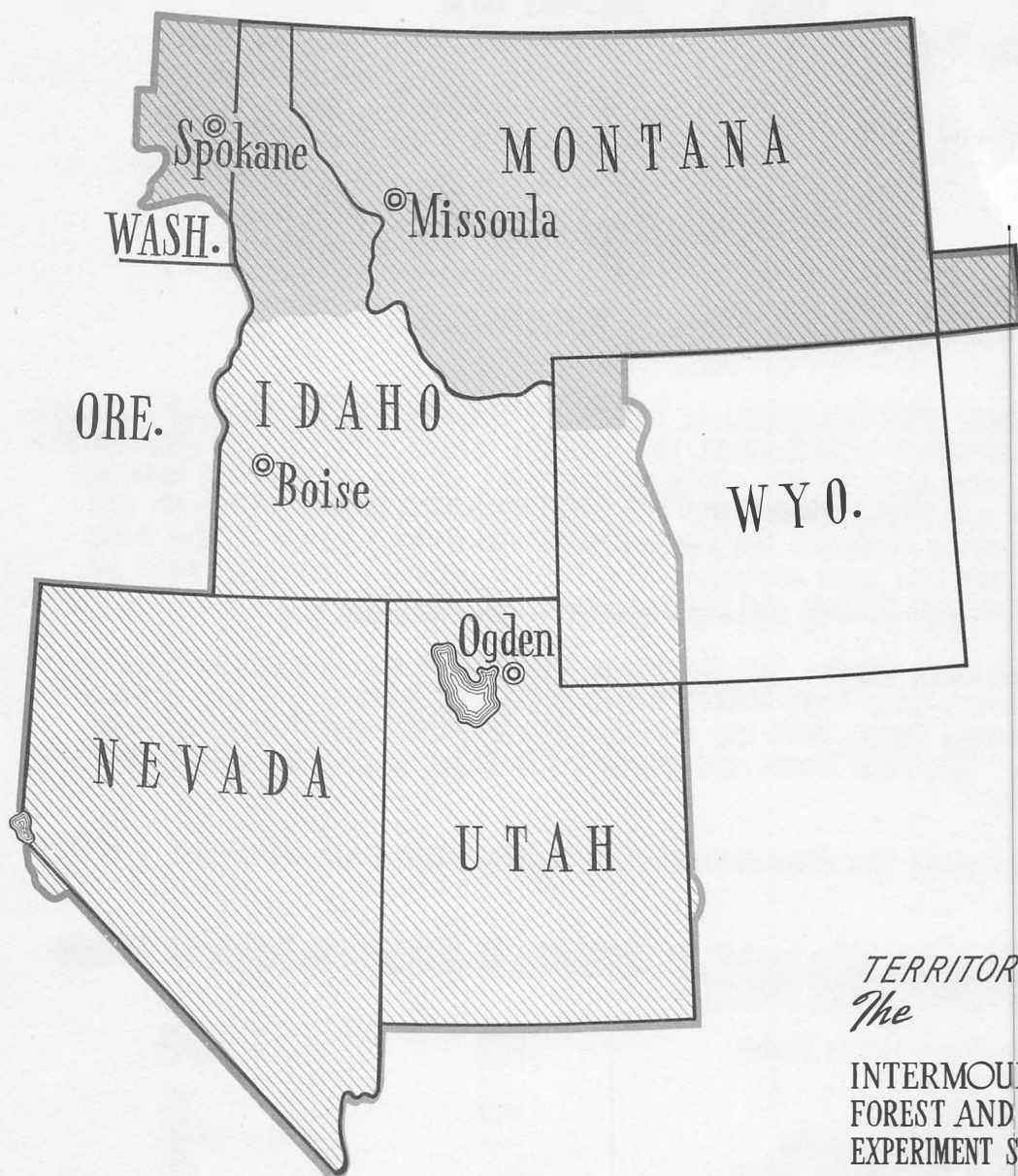
By Tom T. Terrell, Entomologist

Prepared By The
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FOREST INSECT
RESEARCH
MISSOULA, MONTANA

The AREA COVERED BY THIS REPORT



TERRITORY OF..
The

INTERMOUNTAIN
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EXPERIMENT STATION



The MISSOULA FOREST INSECT LABORATORY is a field unit of the Intermountain Forest and Range Experiment Station at Ogden, Utah. The Laboratory conducts forest insect research, surveys forest insect outbreaks, and gives technical advice on cooperative insect control programs in Montana, northwestern South Dakota, northwestern Wyoming, northern Idaho, and northeastern Washington. The functions are conducted in the remaining station territory by staff entomologists at Ogden, and Boise, Idaho.

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May 1, 1956

MOUNTAIN PINE BEETLE INFESTATION
IN GLACIER NATIONAL PARK
1955

Tom T. Terrell, Entomologist

During October 1955 two areas of lodgepole pine timber in Glacier National Park were surveyed to determine the current status of mountain pine beetle outbreaks. One area in the northwestern part of the park lying between Kintla Lake and Starvation Ridge has been surveyed during the past two years by Glacier National Park personnel; the second area, in the Park Creek drainage has been surveyed by a Forest Insect Laboratory crew of the Intermountain Forest and Range Experiment Station.

The mountain pine beetle (Dendroctonus monticolae Hpk.) infestations in these two areas have been active for a number of years. In the Kintla Lake-Starvation Ridge area the infestation has been under observations since 1950. The Park Creek infestation has been active for about the same period.

Table 1 will give the data obtained on current and past surveys.

Table 1.--Mountain pine beetle infestation in the Kintla Lake-Starvation Ridge and Park Creek drainage

Kintla Lake-Starvation Ridge	<u>1954</u>	<u>1955</u>
Acres of sample	49.4	14
Green lodgepole pine	--	1189
Infested lodgepole pine	111	61
Infested trees per acre	2.23	4.4
Park Creek drainage		
Acres of sample	8	9
Green lodgepole pine	544	446
Infested lodgepole pine	73	30
Infested trees per acre	9.1	3.3

The acreage of infestation in the Kintla Lake-Starvation Ridge area is estimated to be 400 acres while the Park Creek infestation covers about 200 acres.

In addition to the data in table 1, approximately 170 infested trees in the Kintla Lake area and 86 infested trees in the Park Creek infestation were closely examined to obtain data on the biological characteristics of the outbreak. There are three important characteristics that may be observed in the fall months that are felt to be indicative of the biological potential of the infestation. These characteristics are: (1) the extent to which the insect brood has been established around the circumference of the individual tree boles, (2) the attacked tree size in relation to other host trees in the immediate vicinity, and (3) the extent to which the attacked trees occur singly or in groups.

The higher infestation potentials seem to occur where a high percentage of the attacked trees are infested with bark beetle brood for their full circumference, where the infested trees are larger than average, and where they are predominately grouped. The data in table 2 shows that the indicated potential of these outbreaks is quite high. Other factors occurring during the winter months and developmental period prior to emergence may have a marked effect on the brood potential.

Table 2.--Infestation characteristics of lodgepole pine attacked by the mountain pine beetle.

	Percent of attacked trees				
	Tree Size				
	Infested full circumference	Below average	Average	Above Average	Occurring in groups
Kintla Lake	76	16	42	43	82
Park Creek	64	13	45	35	86

These bark beetle outbreaks should be kept under observation as long as their active status continues.